



Disposal of Spoiled or Contaminated Grain

Technical Guidance Document SW 98-06

In many locations across Kansas, conventional grain storage facilities are filled to capacity and high crop yields coupled with marketing problems have resulted in the need to store grain on the ground. Outdoor storage may result in significant spoilage and contamination concerns necessitating disposal of unmarketable grains and residuals. This technical guidance document provides guidelines and recommendations related to available disposal methods.

Storage Concerns

Outdoor grain storage can result in spoiled product which brings the potential for odor and contaminated stormwater runoff. Grain piles also attract rodents and other undesirable vectors and scavengers. These nuisances and environmental problems, along with the ongoing decrease in product value, create a strong incentive to eliminate outdoor storage as soon as practical. Anyone storing grain outdoors should be aware of potential health and environmental problems and closely monitor the storage location to minimize impacts to the surrounding area.

Alternate Uses and Disposal Options

When a decision is made that stored grain is no longer wanted, an acceptable alternative use or disposal option must be implemented. Disposal options should be considered and selected before the need to remove the grain becomes urgent, such as in response to a major odor problem.

KDHE has limited knowledge and authority related to alternate uses for spoiled or unwanted grain unless the reuse method could impact human health or the environment, such as the land application of the material. KDHE recognizes that some spoiled or contaminated grain may be used as a **feedstock for alcohol production** or even as **livestock feed**. These uses may be coordinated by the responsible party without department involvement. Also, through this guidance document, **the department is approving of moderate land application practices** where grain is incorporated at agronomic rates of 10 to 20 tons per acre. Higher application rates must be coordinated with the Kansas State Extension Service - Agronomy Dept. in Manhattan (see contact list on reverse

side).

When a beneficial use cannot be identified for the unwanted grain, the responsible party must select one of the following treatment or disposal methods. The methods are presented in order of preference.

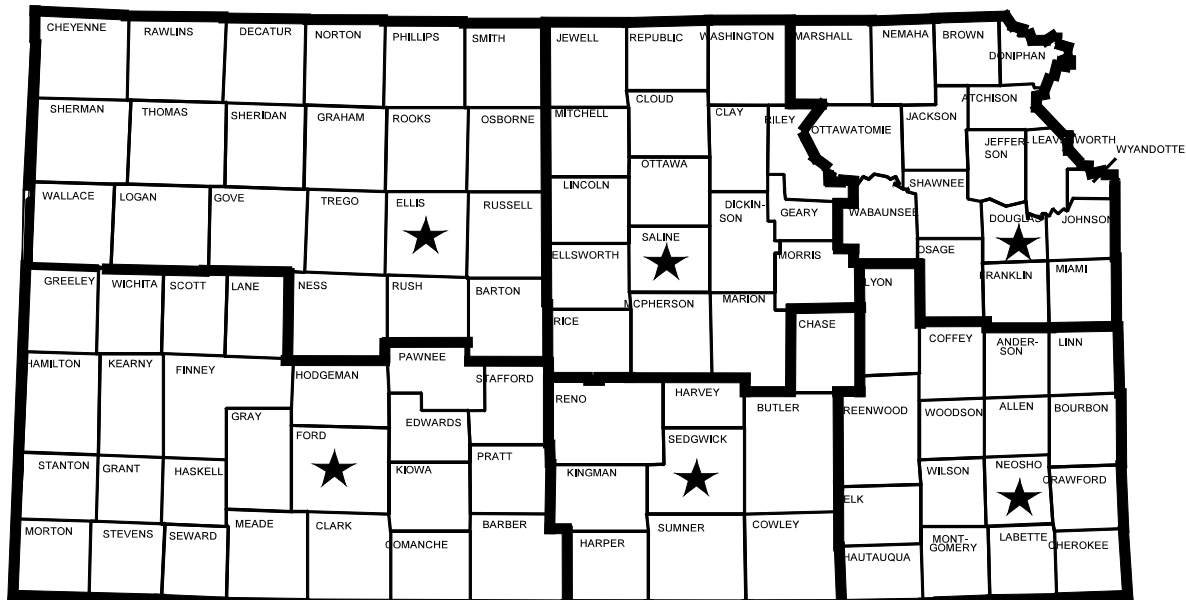
1) **Composting** - Must be performed at a permitted site which is operated in accordance with technically accepted composting methods. To identify an existing composting site or set up a new temporary or permanent composting operation, please contact the Bureau of Waste Management in Topeka.

2) **Disposal in Municipal Solid Waste Landfill** - Must be coordinated with landfill owner/operator, but no special waste disposal authorization is required. Landfills may temporarily store grain in a secure location controlling runoff as they work it into the fill.

3) **Burial in Newly Constructed Trench Fill** - With KDHE approval, the responsible party may locate and construct a new disposal pit for unwanted grain. This option must be coordinated with the local KDHE district office to ensure that the selected area is environmentally acceptable and that the site is properly closed at the completion of disposal activities.

The six KDHE district offices are the main points of contact to answer questions and approve of selected disposal methods. A map of the districts and contacts in each district is provided on the reverse side of this guidance document.

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DIVISION OF ENVIRONMENT
DISTRICT BOUNDARIES AND OFFICES



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NORTHEAST OFFICE - LAWRENCE

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BUREAU OF WASTE MANAGEMENT - TOPEKA

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Composting Contacts Joe Cronin, Ken Powell
Landfill Contacts Phil Rosewicz, Bill Bicher,
Stacey Baalman

KSU EXTENSION SERVICE

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Bill Eberle, Extension Specialist